



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/690,660

10/23/2003

Heui Seag Park

1594.1243

8931

21171

7590

04/24/2006

STAAS & HALSEY LLP

SUITE 700

1201 NEW YORK AVENUE, N.W.

WASHINGTON, DC 20005

EXAMINER

VAN, QUANG T

ART UNIT

PAPER NUMBER

3742

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/690,660

Applicant(s)

PARK, HEUI SEAG

Examiner

Quang T. Van

Art Unit

3742

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-8 and 10-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15,21 and 22 is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10-14,16-20 and 23-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 8 and 25 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 11, and 18 of copending Application No. 10/691,595 in view of Pierce (US 4,337,820). The copending Application No. 10/691,595 discloses a cooking cavity (502); an electrical components area (501) partitioned from the cooking cavity (502); a magnetron (503) disposed in the electrical components area (501); a transformer (11) in the electrical components area (501); a container (10) to accommodate the transformer (11), filled with a cooling material (105) to cool the transformer (11), and having base attached to the electrical components area (501). However, the copending Application No. 10/691,595 does not disclose a temperature-sensitive switch electrically connected to the transformer, wherein the temperature-sensitive switch is mounted on an outside of the transformer assembly. Piece discloses a temperature-sensitive switch (32) electrically connected to the transformer (11), wherein the temperature-sensitive switch

(32) is directly mounted on an outside surface of the transformer assembly (11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in the copending Application No. 10/691,595 a temperature-sensitive switch electrically connected to the transformer, wherein the temperature-sensitive switch is directly mounted on an outside surface of the transformer assembly as taught by Pierce in order to shut off power when a temperature of the transformer is a predetermined overheating temperature.

This is a provisional obviousness-type double patenting rejection.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 8-10, 19-20, 24-25, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin et al (US 3,819,899) cited by applicant in view of Pierce (US 4,337,820). Wallin discloses a cooking cavity (24); an electrical components area (10) partitioned from the cooking cavity (24); a magnetron (15) disposed in the electrical components area (10); a transformer (18) in the electrical components area (10); a transformer assembly (10) to accommodate the transformer (18), filled with a cooling material (col. 2, lines 46-48) to cool the transformer (18), and having base attached to the electrical components area (figure 3). However, Wallin does not disclose

Art Unit: 3742

a temperature-sensitive switch electrically connected to the transformer, wherein the temperature-sensitive switch is mounted on an outside of the transformer assembly.

Pierce discloses a temperature-sensitive switch (32) electrically connected to the transformer (11), wherein the temperature-sensitive switch (32) is directly mounted on an outside surface of the transformer assembly (11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Wallin a temperature-sensitive switch electrically connected to the transformer, wherein the temperature-sensitive switch is directly mounted on an outside surface of the transformer assembly as taught by Pierce in order to shut off power when a temperature of the transformer is a predetermined overheating temperature. With regard to claim 19, the container is being made of copper or aluminum. Wallin and Pierce do not mention what kind of material that the container is being made. It would have been obvious to one having ordinary skill in the art to use copper or aluminum as a material for a container. Doing so would improve cooling of the transformer, since copper and aluminum are good materials for dissipating heat, which is generated from the transformer.

5. Claims 4-5, 7, 11-12, 14, 18 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin et al (US 3,819,899) cited by applicant in view of Pierce (US 4,337,820) and further in view of Lim (US 5,625,520). Wallin/Pierce disclose substantially all features of the claimed invention except a primary coil in the transformer that receives an input voltage, wherein the temperature-sensitive switch is connected in series to the primary coil of the transformer. Lim discloses, figure 1, a

primary coil (L3) in the transformer that receives an input voltage, wherein the temperature-sensitive switch (TH) is connected in series to the primary coil (L3) of the transformer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Wallin/Pierce a primary coil in the transformer that receives an input voltage, wherein the temperature-sensitive switch is connected in series to the primary coil of the transformer as taught by Lim in order to detect and disconnect power when a temperature of a surface of the transformer is a predetermined overheating temperature. With regard to claims 4 and 11, Lim discloses International Electrotechnical Commission (IEC) regulates that the temperature of the high voltage transformer of the microwave oven should not be over 210<sup>0</sup>C. Lim does not disclose the overheating temperature ranges form about 80<sup>0</sup>C to about 150<sup>0</sup>C. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select overheating temperature ranges form about 80<sup>0</sup>C to about 150<sup>0</sup>C, since it has been held that selecting overheating temperature range involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 105 USPQ 233, 235 (CCPA 1995).

6. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin et al (US 3,819,899) cited by applicant in view of Pierce (US 4,337,820) and further in view of Cooney (US 2,053,944). Wallin/Pierce disclose substantially all features of the claimed invention except the temperature-sensitive switch being connected in series to the secondary coil of the transformer. Cooney discloses temperature-sensitive switch being connected in series to the secondary coil of the transformer (, Figure 4, page 1, col. 2, lines 34-39). It would have been obvious to one

having ordinary skill in the art at the time the invention was made to utilize in Wallin/Pierce temperature-sensitive switch being connected in series to the secondary coil of the transformer as taught by Cooney in order to shut off power when a temperature of a surface of the transformer is a predetermined overheating temperature.

7. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin et al (US 3,819,899) cited by applicant in view of Pierce (US 4,337,820) and further in view of Hay (US 4,523,169). Wallin/ Pierce disclose substantially all features of the claimed invention except a separate bracket attached to the base. Hay discloses a separate bracket (54) attached to the base (56). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Wallin/ Pierce a separate bracket attached to the base as taught by Hay for easy to remove the container when maintenance or repair is needed.

8. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin et al (US 3,819,899) cited by applicant in view of Pierce (US 4,337,820) and further in view of Reed (US 1,571,300). Wallin/ Pierce disclose substantially all features of the claimed invention except the container having corrugated sidewalls. Reed discloses a container having corrugated sidewalls (6, lines 70-72). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Wallin/ Pierce a container having corrugated sidewalls as taught by Reed in order to provide a larger heat dissipating area.

9. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wallin et al (US 3,819,899) cited by applicant in view of Pierce (US 4,337,820), Reed (US 1,571,300) and further in view of Cronin (US 4,169,965). Wallin/ Pierce/Reed disclose substantially all features of the claimed invention except a cooling fan. Cronin discloses a cooling fan (36). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Wallin/ Pierce/Reed a cooling fan as taught by Cronin in order to draw external cool air into the electrical component area to cool the transformer.

10. Claims 15, 21, and 22 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or suggest the base comprises a plate with two ends, and the base is formed by bending each end of the plate downwardly and inwardly to space the transformer from the surface of the electrical components area by a certain distance as recited in claim 15; an input line connected to the transformer through a top of the container to provide external power to the transformer, and an output line connected to the transformer through the top of the container to provide power to the magnetron, the input line and the output line being connected to the top of the container using epoxy resin to keep the container tightly sealed as recited in claim 21; a terminal unit attached to a top of the container, an input line connected to the transformer through the terminal unit to provide external power to the transformer, and an output line connected to the transformer through the terminal unit to provide power to the magnetron as recited in claim 22.

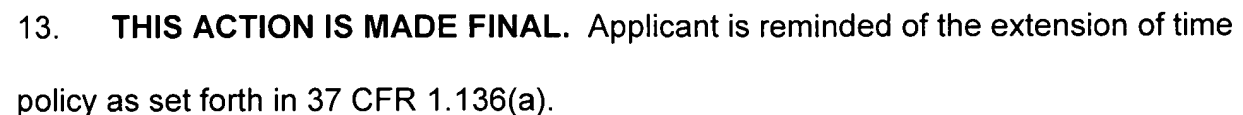


***Response to Amendment***

12. Applicant's arguments filed 3/03/2006 have been fully considered but they are not persuasive.

Applicant argues "Wallin teaches against such combination, and therefore would have been no motivation to make the combination" (recited in REMARKS, page 8, lines 15-16, and "Since Wallin specifies that the electrical components are generally included in the housing, one would not have been motivated to put a temperature switch on an outside thereof. The temperature switch does not fall within the exceptions to this teaching, since the temperature switch is not provided in or near the oven door" (recited in REMARKS, page 8, lines 23-26). The examiner disagrees. The claimed limitation states that "wherein the temperature-sensitive switch is directly mounted on **an outside surface of the transformer assembly**" (recited in claim 1, lines 7-8). Wallin does suggest for any switch may mounting outside the transformer assembly (col. 2, lines 43-45). However, Wallin does not disclose a temperature-sensitive switch electrically connected to the transformer, wherein the temperature-sensitive switch is mounted on an outside of the transformer assembly. Piece discloses a temperature-sensitive switch (32) electrically connected to the transformer (11), wherein the temperature-sensitive switch (32) is directly mounted on an outside surface of the transformer assembly (11). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Wallin a temperature-sensitive switch electrically connected to the transformer, wherein the temperature-sensitive switch is directly mounted on an outside surface of the transformer assembly as taught by Pierce in order

Applicant also argues “with respect to dependent claim 17, the Examiner relies upon the side flange 54 of Hay as corresponding to the claimed bracket. However, the side flange 54 does not teach a plate with ends bent downwardly. Instead, the side flanges 54 are upward relative to **base 52**. Hay, FIG. 2” (recited in REMARKS, last line of page 8 and page 9, lines 1-3). The Examiner disagrees. In rejection of claims 16-17, Hay discloses the **base (56)** is formed by bending each end of the plate downwardly and outwardly... (figure below) , but not base (52) as applicant mistaken in the argument.



A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

Art Unit: 3742

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T. Van whose telephone number is 571-272-4789. The examiner can normally be reached on 8:00Am 7:00Pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QV

QV

April 18, 2006



Quang T Van  
Primary Examiner  
Art Unit 3742